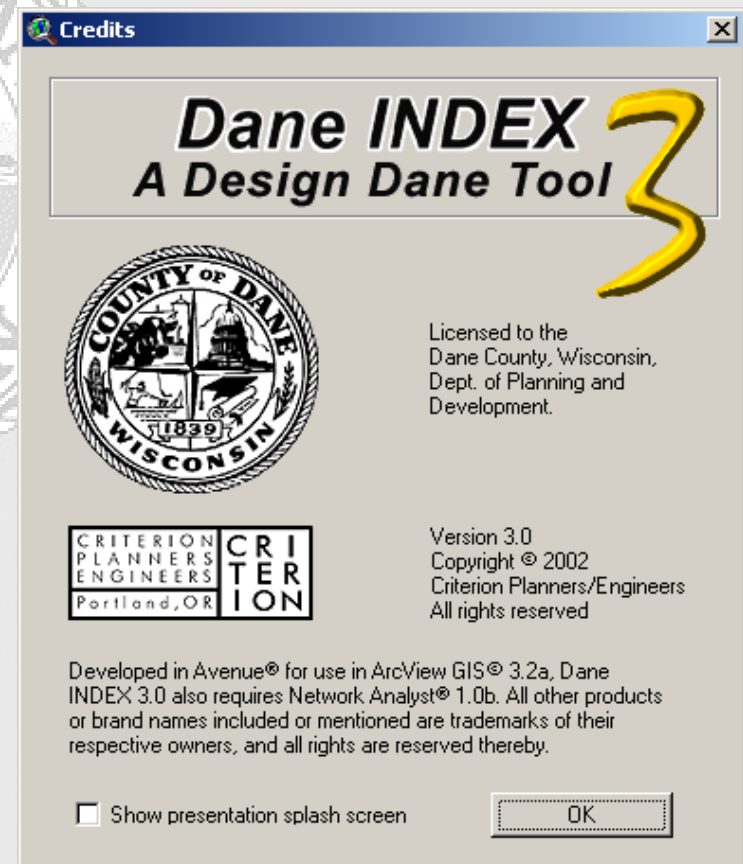
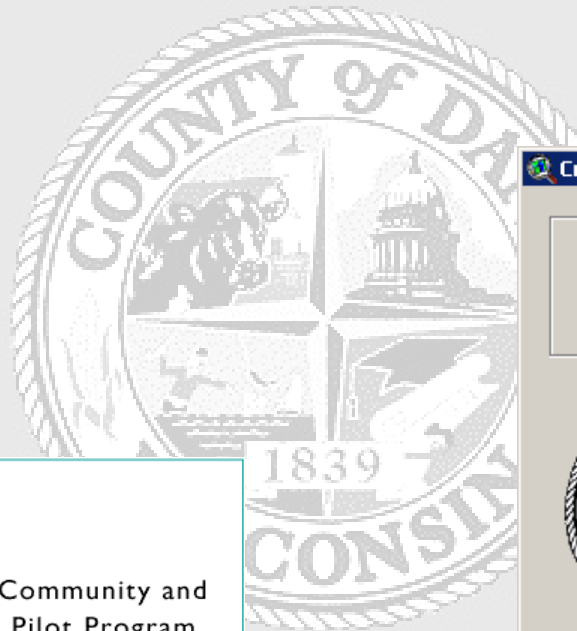


What Is Dane INDEX?



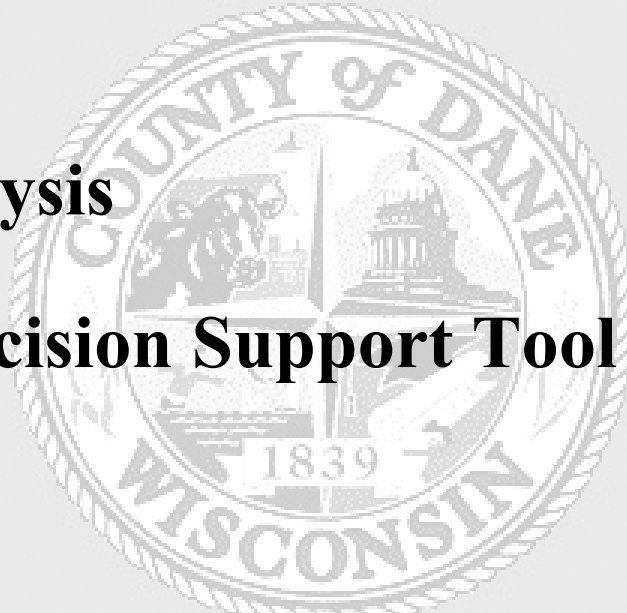
TCSP

Transportation and Community and
System Preservation Pilot Program



Dane INDEX

- **Impact Analysis**
- **Planning Decision Support Tool**
- **ArcView**
- **Avenue Scripting (Encrypted)**
- **PC**



Model Issues

- **Up Front Costs**
- **Distribution**
- **Back Side Costs**
- **Data**



Up Front Costs

- \$140,000 – to develop the model
- \$3900 (2 seat) + \$750 per seat (www.crit.com)
- Model Steward*
- ArcView 3.2a*
- Network Analyst 1.0b*
- Computer Costs*

The minimum hardware configuration for INDEX is a 450 MHZ PC with at least 128 MB of RAM, a 17" or larger monitor capable of a 800 x 600 resolution with 32 bit color, and at least 100 MB of available hard disk space. Studies covering a large geographic area (more than 1 mile square) should be run on a 650 MHZ or higher PC with at least 256 MB of RAM, a 19" or larger monitor capable of a 1024 x 768 resolution with 32 bit color, and at least 500 MB of available hard disk space.

*Variable dependant on existing situations

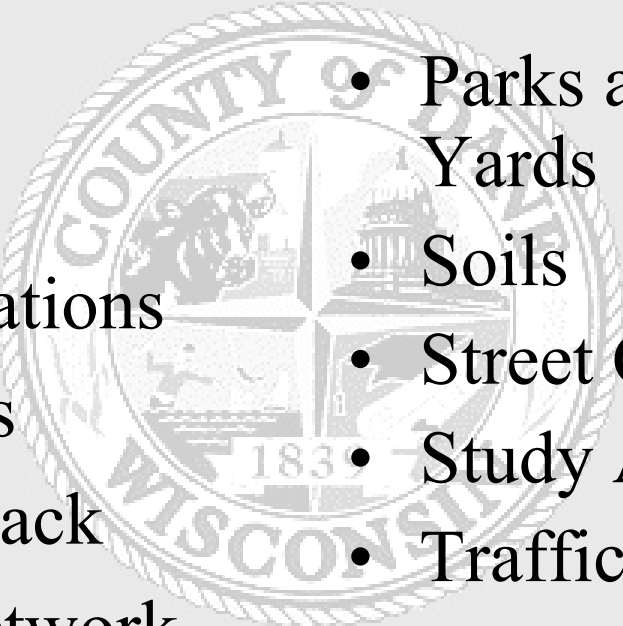
Distribution

- Free to Dane County Communities (61)
- Sub License Agreement
- Support: Model Steward
 - Part of a GIS Model Services Package to less GIS Savvy Communities
 - Distribution to GIS Savvy Communities

Back Side Costs

- Training of the Model Steward
- Training of Local GIS “Expert”
- Multiple ArcView seats??
- Data Purchase/Collection

GIS Data

- 
- Amenities
 - Blocks
 - Business Locations
 - Central Nodes
 - Building Setback
 - Pedestrian Network
 - Parcels*
 - Parking Lots
 - Parks and School Yards
 - Soils
 - Street Center Lines
 - Study Area
 - Traffic Control Device
 - Transit Routes
 - Transit Stops

Parameter Data

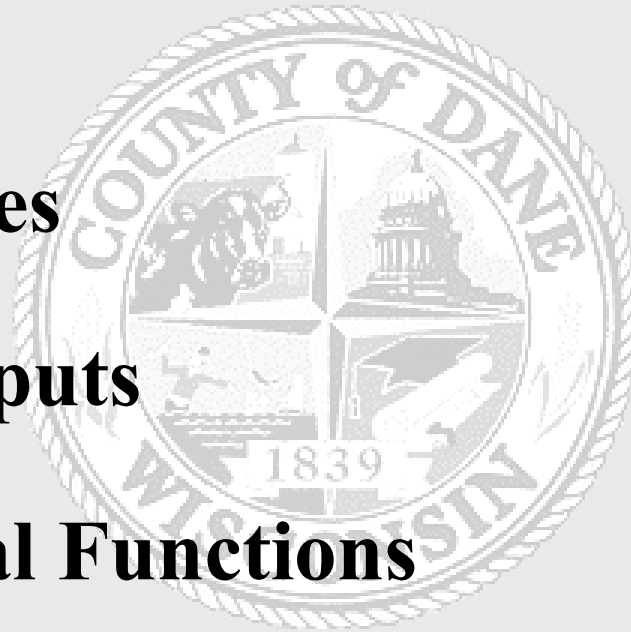
- Net Fiscal Impact
- Hydrologic Curve Numbers
- Maximum Walkable distance
- Rainfall Data
- Residential Indoor Water Use
- Residential Outdoor Water Use
- Vehicle Miles Traveled
- Vehicle Trips

Cell Size Parameters

- Open Space Connectivity
- Stormwater Runoff
- Use Mix

Model Functionality

- **What it does**
- **How it outputs**
- **Our Special Functions**



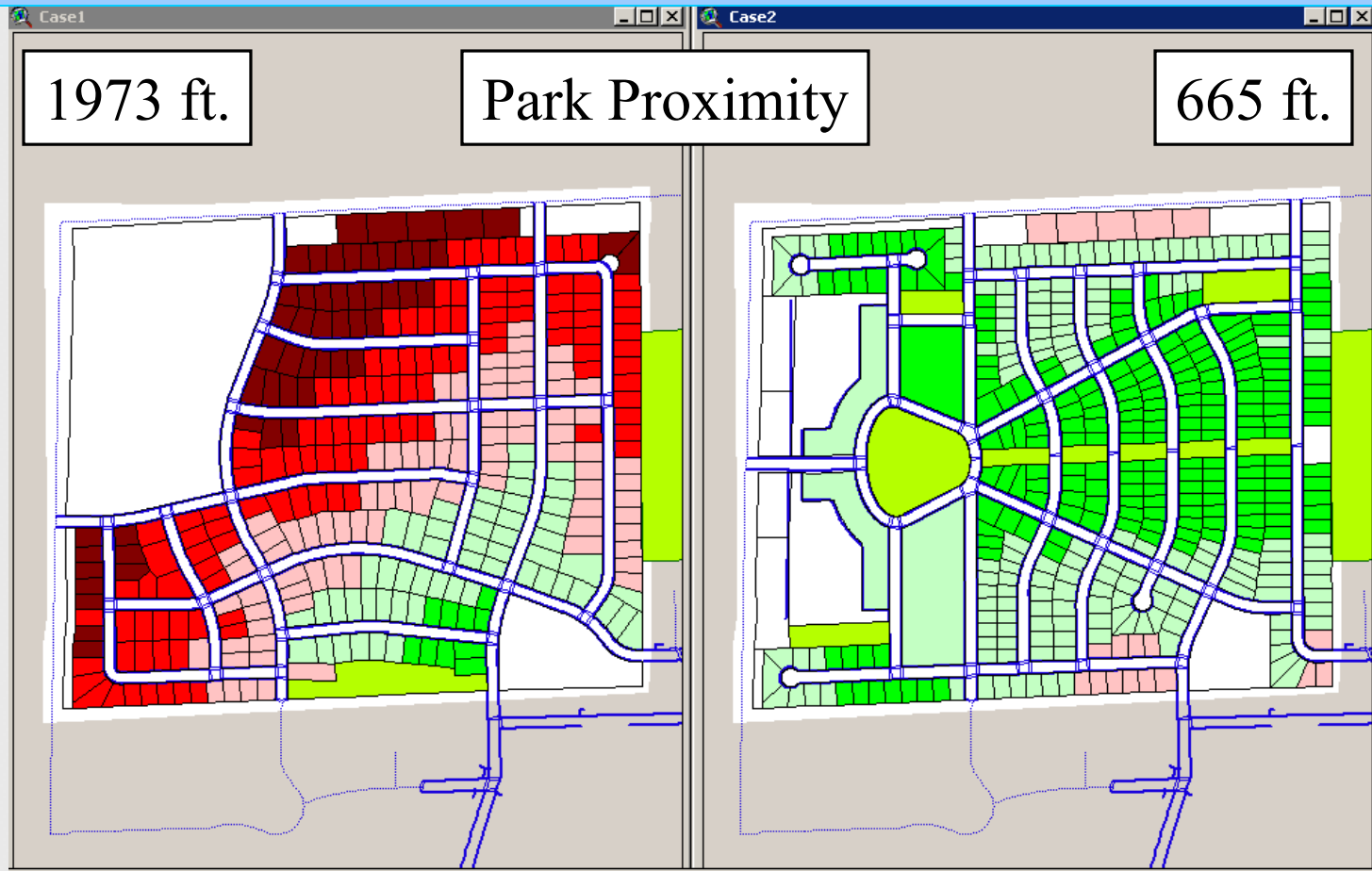
Starting Out

- Study Boundary (Impact Area)
- Geographic Level of Analysis
 - Area vs. Parcel Based
 - Different Available Measurement
- Which Indicators to Use?
- Objectives, Rating & Weighting

The Indicator

- **Measurement (acres, #)**
- **Spatial or Tabular (distance, total)**
- **Assumptions (Parameter)**
- **Calculations (Equations)**
- **Definitions (per capita?)**
- **58 “built in”**
- **Add in additional with scripting**

Indicator Examples



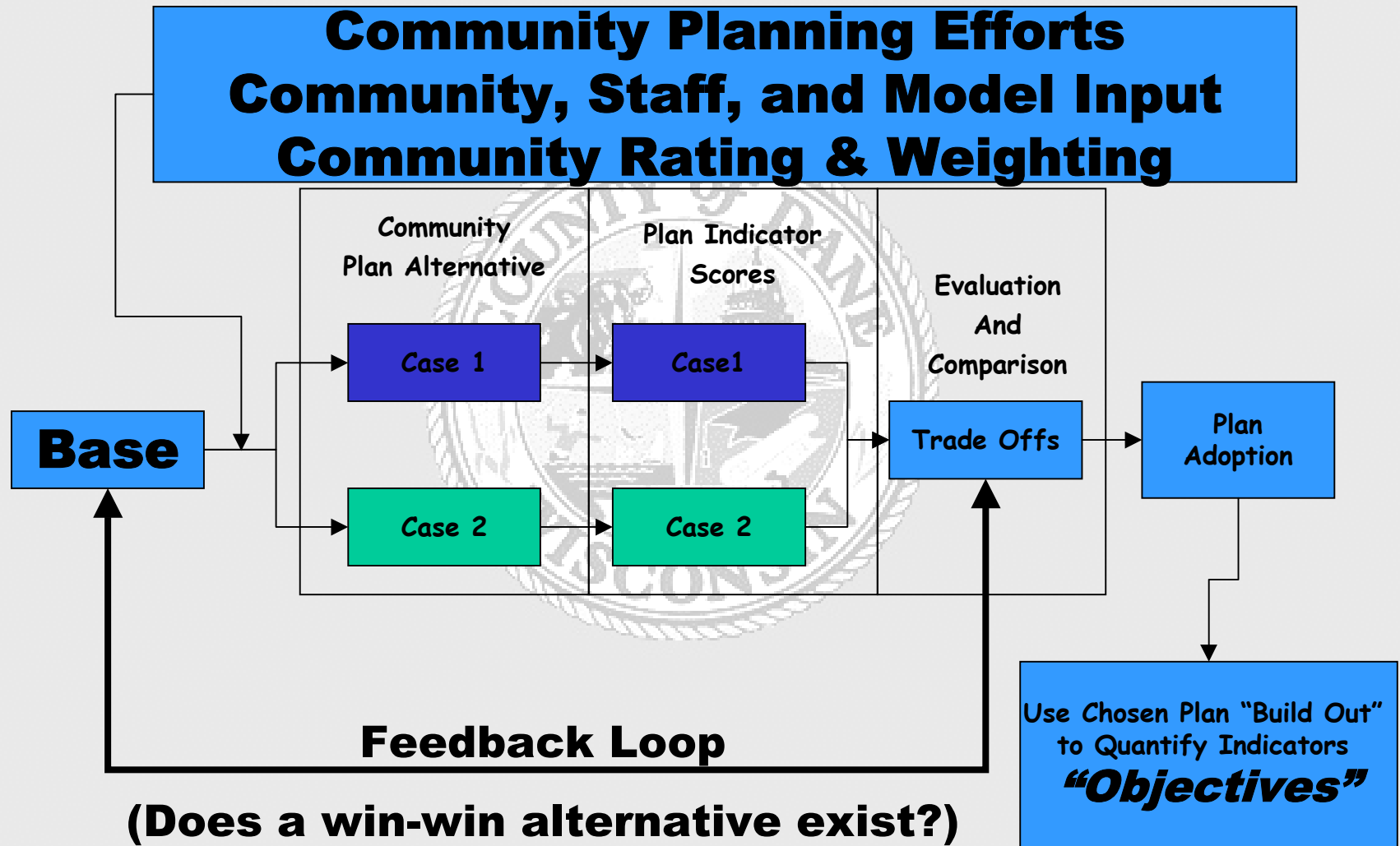
Indicators by Element

Element	Indicators	Examples:
Demographics	2	Population, Employment
Land-Use	7	Parcel Size, Net Fiscal Impact of Dev.
Housing	12	Transit Proximity to Housing
Employment	6	Employment Density
Recreation	3	Park Space Supply, Park Proximity
Environment	7	Imperviousness, Storm-water Runoff
Travel	18	Street Connectivity, Ped. Route Directness, Transit Related
	55*	

Model Usage

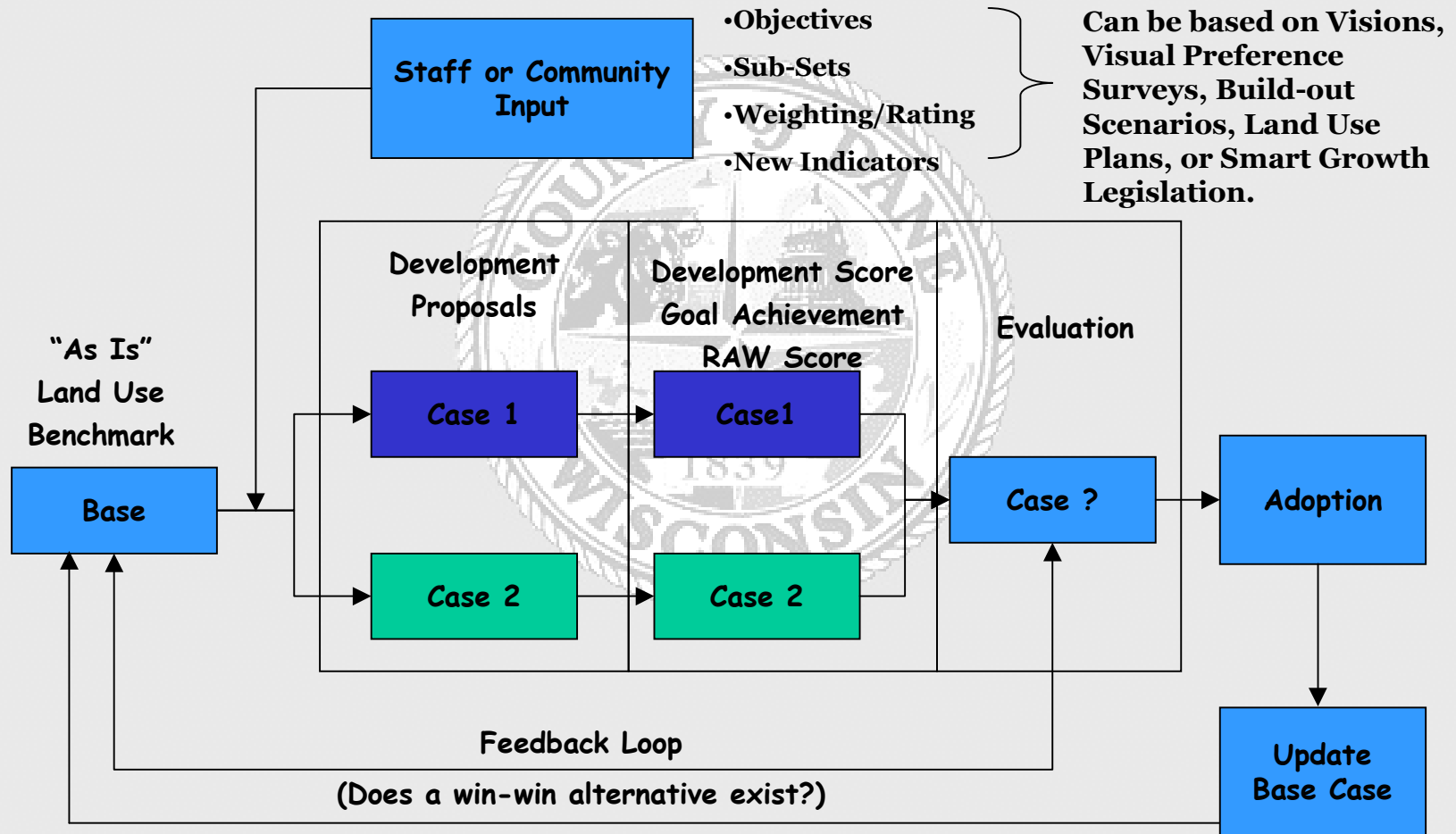
- **Plan Creation**
 - (e.g. Comprehensive Plan Processes)
- **Plan Implementation**
 - (e.g. Individual Development Proposal Review)
- **Plan Achievement**
 - (Fulfillment of Community Planning Goals)

Plan Creation Overview

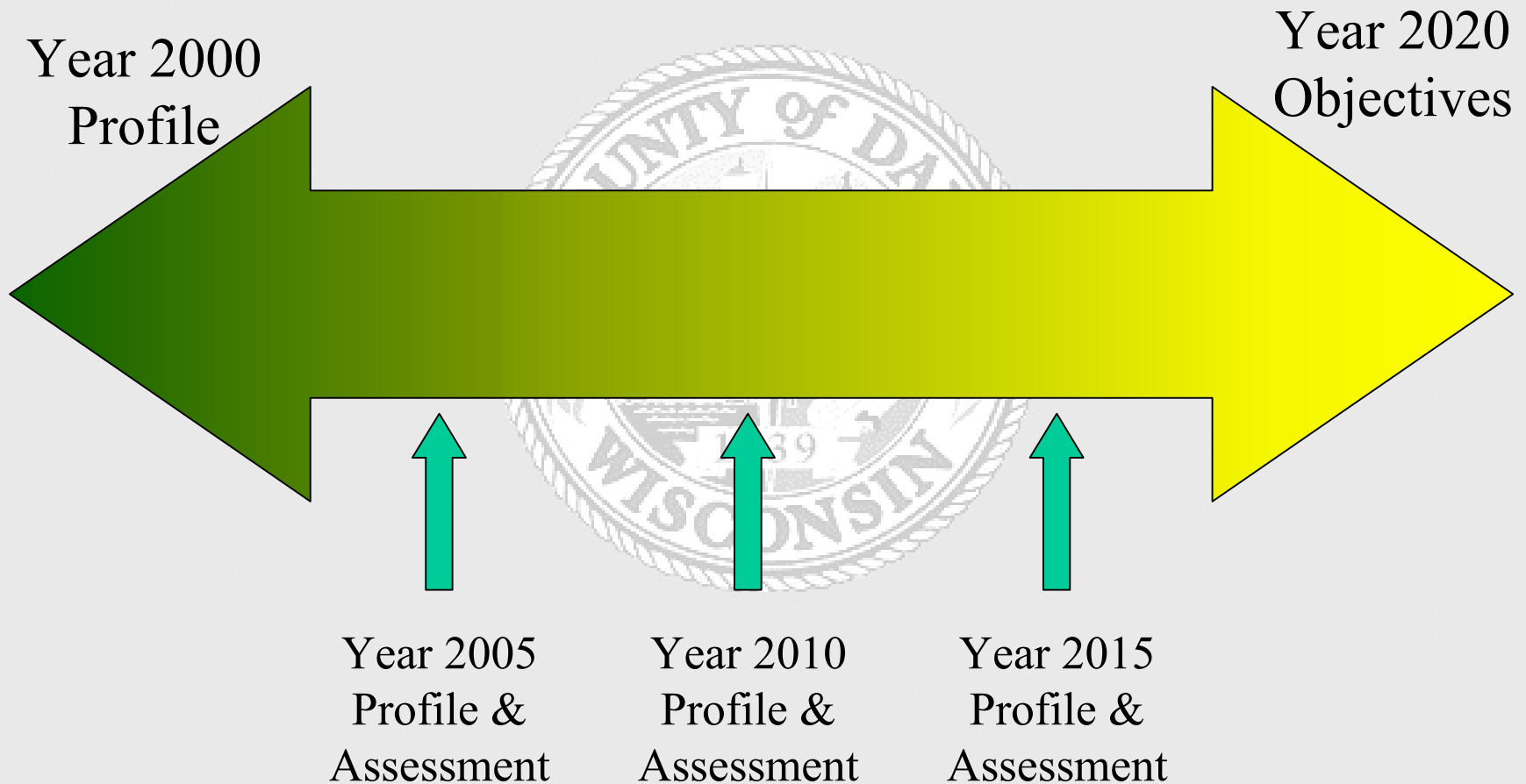


Implementation Overview

“Development Review”



Plan Achievement Overview



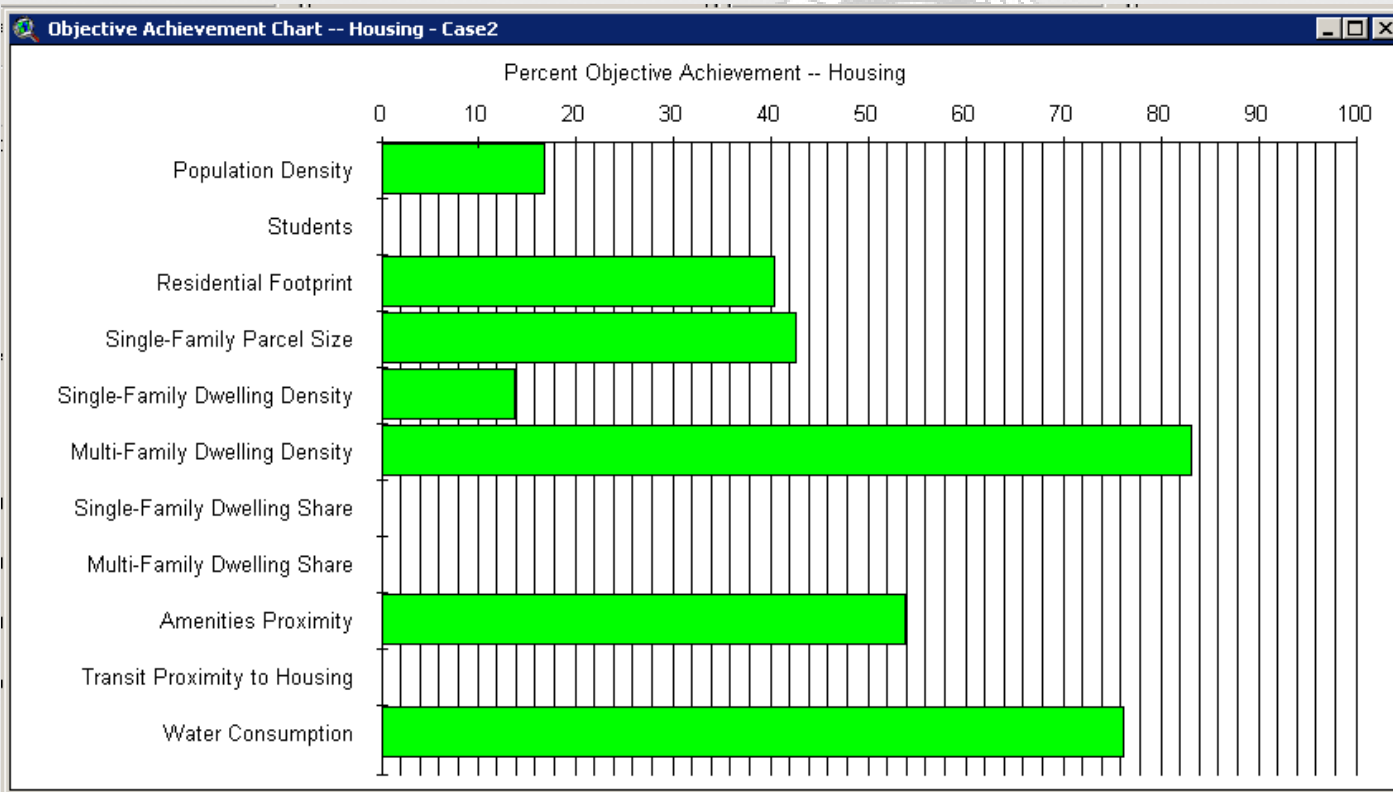
Output

- **Indicator Scores**
 - Table (average)
 - Map (individual parcel or block)
- **Objective Achievement (Chart)**
- **Comparing Case to Case (Charts & Maps)**
- **Rating and Weighting (RAW) Scores (Chart)**

Indicator Scores

Indicator	Goal	Base	Case 1	Case 2
Population	---	12983	13921	14605
Single-Family Dwelling Density	4 – 6 DU/Acre	3.77	3.69	3.84
Park Proximity	1320 ft	1453	1465	1349
Pedestrian Route Directness	1 – 1.25	1.54	1.51	1.39
Multi-Family Dwelling Share	45 %	42	40	43
<i>A map goes with most of these indicators.</i>				

Objective Achievement



Objectives

24-37 res./acre

10 acre/1000 res.

4 – 7,000 sq.ft.

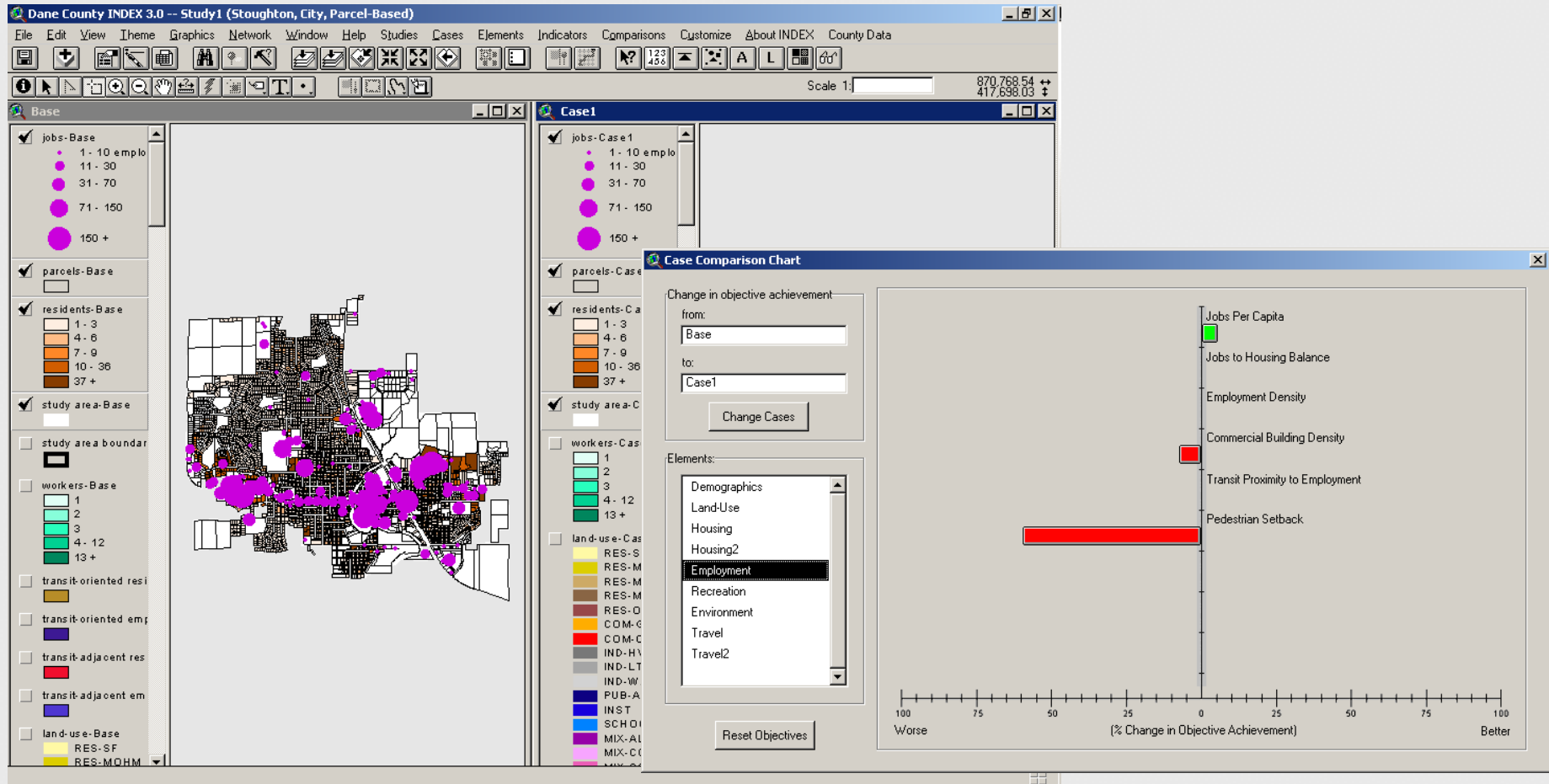
7-11 sf.du./acre

15-25 mf.du/acre

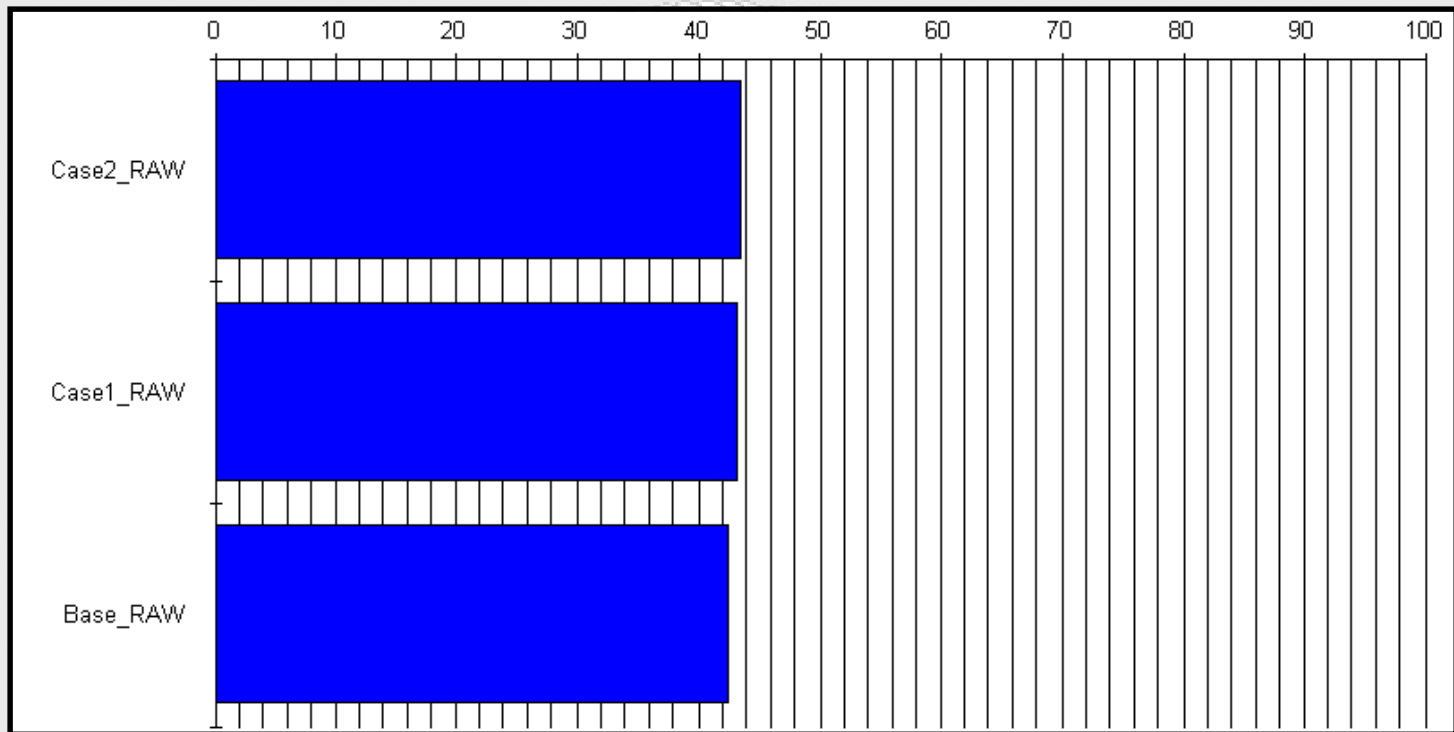
100 Feet

65gal/day/capita

Case Comparisons



RAW Results



Compilation of scores: Stoughton Full Study

Special Features

- **Ag- Based Land Use**
- **LTHIA (Annual Depth in Inches)**
- **Dr. Edwards Fiscal Model (Net \$)**
- **RAW – Indicators (Single Score)**
- **Land Use Change Tool**



***COMMENTS &
QUESTIONS***

CONTACT INFORMATION:

CURT KODL, GIS OUTREACH SPECIALIST

Phone: (608) 266-4183

Fax: (608) 267-1540

Email: kodl@co.dane.wi.us

TODD VIOLANTE, AICP, SENIOR PLANNER

Phone: (608) 266-4021

Fax: (608) 267-1540

Email: violante@co.dane.wi.us

DANE COUNTY PLANNING & DEVELOPMENT DEPARTMENT

210 MLK, Jr. Blvd.

Rm. 116, City-County Building

Madison, WI 53709

Criterion Planners-Engineers

www.crit.com